

### REMARKS

This communication responds to the Office Action mailed on May 4, 2006. No claims are amended, claims 11-26 and 31 are canceled, and no claims are added. As a result, claims 1-10, 27-30, and 32-35 are now pending in this Application, with claims 8-9 and 28-29 being withdrawn.

#### §103 Rejection of the Claims

Claims 1-7, 10-11, 27, and 30-35 were rejected under 35 USC § 103(a) as being unpatentable over Nagasaka (U.S. 6,201,286; hereinafter “Nagasaka”) in view of Gobbi et al. (U.S. 6,114,930; hereinafter “Gobbi”). Claims 1-7, 10-11, 27, and 30-35 were also rejected under 35 USC § 103(a) as being unpatentable over Nagasaka in view of Novak et al. (U.S. 6,525,622; hereinafter “Novak”) and further in view of Gobbi. It is believed that the Examiner intended to indicate the rejection of claims 1-7, 10, 27, 30 and 32-35, since claims 11 and 31 have been canceled. Thus, only the rejection of claims 1-7, 10, 27, 30, and 32-25 will be discussed hereinafter.

First, the Applicant does not admit that Nagasaka, Novak, or Gobbi are prior art, and reserves the right to swear behind these references in the future. Second, since a *prima facie* case of obviousness has not been properly established, the Applicant respectfully traverses this rejection.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references. *Id.* The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed

combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d (BNA) 1443 (Fed. Cir. 1992). However, while it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 U.S.P.Q.2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)). The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which notes that the motivation must be supported by evidence in the record.

No proper *prima facie* case of obviousness has been established because (1) combining the references does not teach all of the limitations set forth in the claims, (2) there is no motivation to combine the references, and (3) combining the references provides no reasonable expectation of success. Each of these points will be explained in detail, as follows.

***Combining The References Does Not Teach All Limitations:*** With respect to independent claims 1 and 27, the Office asserts that "Nagasaka discloses the first contact point (13a) having electrically connected to IC chips or chip component, see column 4, lines 30-35. The electrical/chip component would be as a capacitor chip component, a decoupling capacitor, or a capacitor." The Office goes on to admit that "Nagasaka does not teach a summed series resistance provided by adding a value of resistance to the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane connected to the circuit board."

To remedy this deficiency in Nagasaka, the Office asserts that "Gobbi et al. shows an impedance controlled by the phase angle between two signals ... comprising a summed series resistance provided by adding a value of resistance to the resistive element to an effective series

resistance of the capacitor ...”. However, a careful reading of Gobbi reveals this assertion to be incorrect.

The cited portion of Gobbi mentions only the parasitic capacitance associated with an inductor. *See Gobbi*, Col. 5, lines 58-61. That is, Gobbi does not even teach the existence of a capacitor – only the existence of the inductor’s parasitic capacitance. Thus, it is impossible for Gobbi to teach that a summed series resistance is associated with an effective series resistance of a capacitor, because no capacitor is mentioned.

Gobbi operates to adjust a resonant frequency by increasing the value of the inductance, and changing the relationship between the inductance and the parasitic capacitance. *See Gobbi*, Col. 6, lines 12-21. Therefore, the effective series resistance of a capacitor is not contemplated by Gobbi, and this same deficiency exists with respect to Nagasaka and Novak.

Since neither Nagasaka, Novak, nor Gobbi teach the existence of an effective series resistance for a capacitor, no combination of these references results in “a summed series resistance provided by adding a value of resistance for the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane,” as claimed by the Applicant. Therefore, a *prima facie* case of obviousness has not been established with respect to independent claims 1 and 27. It is respectfully noted that if an independent claim is nonobvious under 35 USC § 103, then any claim depending therefrom is also nonobvious. See M.P.E.P. § 2143.03. Therefore all of the rejected dependent claims (i.e., claims 2-7, 10, 30, and 32-35) are also nonobvious.

**No Motivation to Combine the References:** The Office asserts that “it would have been obvious ... to have a teaching of Gobbi et al. employed in the apparatus of Nagasaka in order to form an equivalent circuit to control a frequency applied on a circuit board.” However, it is respectfully noted that Nagasaka is directed to preventing cracks caused by residual stress in a circuit board. *See Nagasaka*, Abstract. Gobbi is directed to controlling the impedance of a device, and not a frequency. *See Gobbi*, Abstract. Since neither Nagasaka nor Gobbi describe “controlling a frequency applied on a circuit board” this assertion has no support in the references.

The use of unsupported assertions in the Office Action does not satisfy the explicit requirements needed for demonstrating motivation as set forth by the *In re Sang Su Lee* court.

Therefore, the Examiner appears to be using personal knowledge to make this assertion, and is respectfully requested to submit an affidavit as required by 37 C.F.R. § 1.104(d)(2).

**No Reasonable Expectation of Success:** Since any combination of Nagasaka, Gobbi, and Novak fails to teach “a summed series resistance provided by adding a value of resistance for the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane,” as claimed by the Applicant, one of skill in the art would not expect any success in combining these references. That is, employing the teachings of Gobbi with respect to determining a mounted capacitor resistance in the resistive element of Nagasaka would not result in the ability to match circuit board and interconnection resistance, because Gobbi fails to teach or even suggest the existence of an effective series resistance for a capacitor.

In summary, since there is no evidence in the record to support disclosure by Nagasaka, Novack, or Gobbi of a “summed series resistance provided by adding a value of resistance for the resistive element to an effective series resistance of the capacitor is approximately equal to an effective series resistance of a circuit board and the circuit board plane,” as claimed by the Applicant; since there is no motivation to combine Novak or Gobbi with Nagasaka to supply the missing element; and since no reasonable expectation of success arises even if such a combination is made, a *prima facie* case of obviousness has not been established with respect to independent claims 1 and 27, or any of the claims that depend from them. It is therefore respectfully requested that the rejection of claims 1-7, 10, 27, 30, and 32-25 under 35 U.S.C. § 103 be reconsidered and withdrawn.

**CONCLUSION**

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney ((210) 308-5677) to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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